# Fall 2009 Levee Maintenance Deficiency Summary Report Overall LMA & Unit Ratings, including DWR Erosion Survey

### San Joaquin River Basin

RD2062	Overall LMA Rating	Total LMA Miles				
Reclamation District No. 2062 Stewart	U	12.35				
	0	12.55			Encroad	chments
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	PO Miles	
Vegetation	0.01		0.01	0.08%		
Encroachments	1.40		1.40	11.34%		
Animal Control	0.07		0.07	0.57%		
Slope Stability	0.01		0.01	0.08%		
Crown Surface / Depressions / Rutting	2.55		2.55	20.65%		
DWR Erosion Survey	0.16	0.11	0.60	4.86%		
LMA Totals:	4.20	0.11	4.64	37.57%	0.00	0.00
Unit No. 01 San Joaquin River	Overall Unit Rating	Total Unit Miles				
	A	2.69				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	PO Miles	chments CO Miles
Slope Stability	0.01		0.01	0.37%		
DWR Erosion Survey	0.03		0.03	1.12%		
Unit Totals:	0.04	0.00	0.04	1.49%	0.00	0.00
Unit No. 02 Paradise Cut	Overall Unit Rating	Total Unit Miles				
	U	4.03				
					Encroachments	
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	PO Miles	CO Miles
Encroachments	1.40		1.40	34.74%		
Crown Surface / Depressions / Rutting	2.54		2.54	63.03%		
DWR Erosion Survey	0.11		0.11	2.73%		
Unit Totals:	4.05	0.00	4.05	100.50%	0.00	0.00
Unit No. 03 Old River	Overall Unit Rating	Total Unit Miles	10.00%; hov	Threshold Percer	iles are pres	
	M *	5.63	lile Overall (	Jnit Rating is M in		
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	PO Miles	chments CO Miles
Vegetation	0.01		0.01	0.18%		
Animal Control	0.07		0.07	1.24%		
Crown Surface / Depressions / Rutting	0.01		0.01	0.18%		
DWR Erosion Survey	0.02	0.11	0.46	8.17%		
	0.11	0.11	0.55	9.77% *	0.00	0.00

### **LMA District Cover Sheet**

### Fall 2009 Levee Inspection Results

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)							
* Overall LMA Rating (Fall Only)			U								
** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.											
* SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.  FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.											
omments											

## Flood Control Project Maintenance Levee Inspections

### **Unit Cover Sheet**

### Fall 2009 Levee Inspection Results

	Bank	Unit Miles									
	Unit No. 01 San	Joaquin River		Left	2.69						
	Spring (March - May)	Summer (June - August)	(September - November) Fall		Winter ber - February)						
Unit Maintenance Rating (Fall Only)			Α								
Date of Inspection	4/20/2009		10/29/2009								
DWR Inspector	Richard Willoughby		John Paasch								
Accompanied By			Michael Moncrief MBK Engineers								
project components conditions other tha	vinter (or summer) inspection p identified in the attached Leve n the results of our normal mai ed in the enclosed report.	e Inspection Report by	Mile. We have found no chang	ges in flo							
During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.  (In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).											
Comments											
information must also be	3	eet should be signed ar	nd dated by the LMA Represent ch 31 (Winter Inspection). Pleat spection Reports charge, Room LL-30	tative an	d returned to						
•											
X Signature of LMA Repres	sentative		Date								

### Levee Inspection Report By Mile - Fall 2009

### **Reclamation District No. 2062 Stewart**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	2.69	10/30/2009 12/10/2009	John Paasch

LMR			Category	Item	Rating ** Location		Action/Comment	GPS Latitude/Longitude Issu			
No.	Start	End	Calegory	item	tion	ing	Action/Comment	Start	End	Photo	
1	0.02	0.11	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.807292 ° 37 -121.327692 ° -121		940	
2	0.13	0.19	Earthen Levee	Vegetation	CR	С	Control annual grass and weeds on the levee slopes and easements.	37.806345 ° 37 -121.326270 ° -121.		939	
3	0.28	0.33	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.804850 ° 37 -121.324241 ° -121		938	
4	0.43	0.43	Earthen Levee	Vegetation	WS	С	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Locust Plant	37.804567 ° 37 -121.321733 ° -121.		937	
5	0.49	0.49	Earthen Levee	Animal Control	CR	С	Exterminate rodents and backfill and compact or grout burrows.	37.804808 ° 37 -121.320709 ° -121		936	
6	0.65	0.68	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.805360 ° 37 -121.317920 ° -121		935	
7	0.72	0.72	Earthen Levee	Trim / Thin Trees	WS	С	Trim trees to at least five feet above ground level.	37.805203 ° 37 -121.316656 ° -121		934	
8	0.74	0.80	Earthen Levee	Vegetation	CR	С	Control annual grass and weeds on the levee slopes and easements.	37.805141 ° 37 -121.316436 ° -121.		933	
9	0.81	0.81	Earthen Levee	Trim / Thin Trees	WS	С	Trim trees to at least five feet above ground level.	37.804747 ° 37 -121.315199 ° -121.		932	
10	0.91	0.99	Earthen Levee	Vegetation	CR	С	Control annual grass and weeds on the levee slopes and easements.	37.804003 ° 37 -121.313752 ° -121.		931	
11	0.91	0.91	Supplemental	DWR Erosion Survey	WS	M	Inspector Comments: 2009: recommend removal of site from list, per CLRO CES Evaluation 2008 Report; landside ground surface has been raised to the height of the levee crown; site # same as RM54.34,LM1.08 previously rated "M" [2009 SiteID:RD2062U1RM54.14]	37.804080 ° 37 -121.314060 ° -121		2	
12	1.01	1.03	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.802670 ° 37 -121.313601 ° -121.		930	
13	1.09	1.16	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.801497 ° 37 -121.313683 ° -121.		929	
14	1.34	1.44	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.797972 ° 37 -121.313700 ° -121.		928	
15	1.63	1.69	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.794150 ° 37 -121.315449 ° -121		927	

\* Location

LS : Land Side

WS : Water Side

CR : Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing CO : Completely Obstructing N : Not Inspected

### Levee Inspection Report By Mile - Fall 2009

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	2.69	10/30/2009 12/10/2009	John Paasch

LMR	Levee Mile Ca		Cotogony	Item	Location	Rating	Action/Comment	GPS Latitud	e/Longitude	Issue No.
No.	Start	End	Category	пеш	tion	ing	Action/Comment	Start	End	Photo
16	1.82	1.94	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.792024 ° -121.313579 °	37.792008 ° -121.311356 °	926
17	1.99	1.99	Earthen Levee	Trim / Thin Trees	WS	С	Trim trees to at least five feet above ground level. Inspector Comments: Large Oak with hanging branch	37.792332 ° -121.310757 °	37.792332 ° -121.310757 °	925
18	2.16	2.16	Earthen Levee	Trim / Thin Trees	WS	С	Trim trees to at least five feet above ground level. Inspector Comments: Willows	37.794138 ° -121.308868 °	37.794138 ° -121.308868 °	924
19	2.23	2.23	Earthen Levee	Slope Stability	WS	М	Repair the levee slope damaged by foot traffic and prevent access where possible.	37.793438 ° -121.308031 °	37.793438 ° -121.308031 °	923
20	2.24	2.26	Supplemental	DWR Erosion Survey	WS	M	Inspector Comments: 2009: On berm; dense vegetation surrounding site; landside ground surface raised to height of levee crown; recommend removal of site from list, per CLRO CES Evaluation 2008 Report; site # same as RM55.75,LM2.25; previously rated "U" [2009 SiteID:RD2062U1RM55.57]	37.793120 ° -121.308110 °		1
21	2.25	2.43	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.793037 ° -121.307908 °	37.790698 ° -121.308622 °	922
22	2.59	2.62	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.788456 ° -121.308772 °	37.788008 ° -121.309387 °	921

### **Unit Cover Sheet**

### Fall 2009 Levee Inspection Results

	Bank	Unit Miles									
	Unit No. 02 Pa	aradise Cut		Right	4.03						
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February							
Unit Maintenance Rating (Fall Only)			U								
Date of Inspection	4/20/2009		10/29/2009								
DWR Inspector	Richard Willoughby		John Paasch								
Accompanied By			Michael Moncrief  MBK Engineers								
Check one:  During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.  During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.											
(In the comment see	ction below or on additional sh n (Land Side, Water Side, or C										
Comments											
information must also be	3	eet should be signed an	d dated by the LMA Representh 31 (Winter Inspection). Pleaspection Reports, Room LL-30	itative an	d returned to						
x											
Signature of LMA Repres	sentative		Date								

### Levee Inspection Report By Mile - Fall 2009

### **Reclamation District No. 2062 Stewart**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Paradise Cut	Right	4.03	10/30/2009 12/10/2009	John Paasch

LMR	Levee Mile Start End Category Item * To a start End Category		Action/Commont	GPS Latitude	e/Longitude	Issue No.				
No.	Start	End	Calegory	item	tion	ing	Action/Comment	Start	End	Photo
1	0.00	2.54	Earthen Levee	Crown Surface / Depressions / Rutting	CR	M	Add appropriate gravel or road base. Grade and compact.	37.777710° 37.777710°-		3
2	2.54	3.94	Earthen Levee	Encroachments	LS	М	Agricultural tilling Inspector Comments: Disking of the levee slope is the district's vegetation control method. Over time this could degrade the levee and create an integrity issue.	37.801211 ° -121.367142 ° -	37.808230 ° 121.390260 °	6
3	2.81	2.81	Earthen Levee	Encroachments	WS	С	Garbage	37.803502 ° -121.371352 ° -		4
4	3.27	3.28	Supplemental	DWR Erosion Survey	WS	М	Inspector Comments: 2009: Damage most likely caused by agricultural equipment during clearing operation; maintenance issue [2009 SiteID:RD2062U2RM2.14]	37.804604 ° -121.379454 ° -	37.804604° 121.379454°	2
5	3.29	3.29	Earthen Levee	Encroachments	LS	С	Pipe Inspector Comments: Remove abandoned pipe from landside slope.	37.804742 ° -121.379820 ° -		5
6	3.44	3.53	Supplemental	DWR Erosion Survey	WS	M	Inspector Comments: 2009: 1' Vertical scarp on toe; damage most likely caused by farming equipment during clearing operation; maintenance issue [2009 SiteID:RD2062U2RM1.94]	37.805422 ° -121.383173 ° -	37.805422 ° 121.383173 °	1
7	3.90	3.90	Earthen Levee	Trim / Thin Trees	LS	С	Trim trees to at least five feet above ground level.	37.807728 ° -121.389822 ° -	37.807728 ° 121.389822 °	7

\* Location LS : Land Side WS : Water Side CR : Crown \*\* Rating

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## Flood Control Project Maintenance Levee Inspections

### **Unit Cover Sheet**

### Fall 2009 Levee Inspection Results

	Bank	Unit Miles										
	Unit No. 03	Old River		Left	5.63							
	Spring (March - May)	Summer (June - August)	(September - November) Fall		Winter ber - February)							
Unit Maintenance Rating (Fall Only)			M									
Date of Inspection	4/20/2009		10/29/2009									
DWR Inspector	Richard Willoughby		John Paasch									
Accompanied By			Michael Moncrief MBK Engineers									
Check one:  During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.  During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.												
(In the comment see	ction below or on additional she n (Land Side, Water Side, or C											
Comments												
information must also be	3	eet should be signed ar	nd dated by the LMA Represent ch 31 (Winter Inspection). Pleast spection Reports Room LL-30	tative an	d returned to							
x												
Signature of LMA Repres	sentative		Date									

### Levee Inspection Report By Mile - Fall 2009

### **Reclamation District No. 2062 Stewart**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 03 Old River	Left	5.63	10/30/2009 12/10/2009	John Paasch

LMR	Levee	Mile	Category	Item	Location *	Rating	Action/Comment	GPS Latitud	le/Longitude	Issue No.
No.	Start	End	Outogory	item	tion	ng	/ total ii Comment	Start	End	Photo
1	0.23	0.32	Supplemental	DWR Erosion Survey	ws	U	Inspector Comments: 2009: No change observed; combined with RM 30.13 and 30.02 with total length of 465 ft; recommend annual assessment and monitoring of erosion site, per CLRO CES Evaluation 2008 Report; previously rated "M" [2009 SiteID:RD2062U3RM30.19]	37.810609 ° -121.385879 °	37.810609° -121.385879°	1
2	0.26	0.26	Earthen Levee	Crown Surface / Depressions / Rutting	CR	M	Add appropriate gravel or road base. Grade and compact.	37.810621 ° -121.385975 °	37.810621 ° -121.385975 °	925
3	0.41	0.41	Earthen Levee	Vegetation	LS	С	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Bamboo	37.810958 ° -121.383492 °	37.810958 ° -121.383492 °	3
4	0.47	0.47	Earthen Levee	Vegetation	ws	С	Remove the wild growth other than native grasses from the levee slopes.	37.811913 ° -121.382877 °	37.811913 ° -121.382877 °	926
5	0.56	0.57	Supplemental	DWR Erosion Survey	ws	U	Inspector Comments: 2009; no change observed; concrete piles placed on upper portion of slope as rip rap; recommend as local maintenance issue, per CLRO CES Evaluation 2008 Report; site # same as RM30.43,LM0.63; previously rated "U" [2009 SiteID:RD2062U3RM30.43]	37.813070 ° -121.383100 °	37.813070 ° -121.383100 °	2
6	1.05	1.05	Earthen Levee	Trim / Thin Trees	LS	С	Trim trees to at least five feet above ground level.	37.817725 ° -121.378590 °	37.817725 ° -121.378590 °	927
7	1.06	1.06	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.819371 ° -121.377999 °	37.819371 ° -121.377999 °	948
8	1.08	1.11	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.818127 ° -121.378739 °	37.818604 ° -121.378986 °	949
9	1.20	1.21	Supplemental	DWR Erosion Survey	WS	M	Inspector Comments: 2009: No Change observed; pocket just above toe riprap; dense vegetation growth since 2006 survey; recommend as a local maintenance issue, per CLRO CES Evaluation 2008 Report; site # same as RM31.12,LM1.25; previously rated "U" [2009 SiteID:RD2062U3RM31.12]	37.819290 ° -121.378880 °	37.819290 ° -121.378880 °	4
10	1.27	1.27	Earthen Levee	Trim / Thin Trees	LS	С	Trim trees to at least five feet above ground level.	37.819782 ° -121.377471 °	37.819782 ° -121.377471 °	947
11	1.37	1.37	Earthen Levee	Vegetation	LS	М	Elderberries are blocking visibility and flood fight capability.	37.820856 ° -121.377058 °	37.820856 ° -121.377058 °	946

\* Location LS : Land Side WS : Water Side CR : Crown \*\* Rating

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#### Flood Control Project Maintenance Levee Inspections

### Levee Inspection Report By Mile - Fall 2009

### **Reclamation District No. 2062 Stewart**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 03 Old River	Left	5.63	10/30/2009 12/10/2009	John Paasch

LMR	Levee	Mile	Catagory	Itom	Location	Rating	Action/Comment	GPS Latitud	le/Longitude	Issue No.
No.	Start	End	Category	Item	tion	ing	Action/Comment	Start	End	Photo
12	1.42	1.43	Supplementa	DWR Erosion Survey	WS	M	Inspector Comments: 2009: sliding at base; tree root exposed; visible man-made trail from crown to toe; recommend as a local maintenance issue, per CLRO CES Evaluation 2008 Report; site # same as RM31.3,LM1.45; previously rated "M' [2009 SiteID:RD2062U3RM31.28]	37.821380° -121.376900°	37.821380° -121.376900°	
13	1.53	1.53	Earthen Levee	Animal Control	LS	М	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.  Inspector Comments: Active rodent holes found on landside slope.	-121.374799 °	37.821266 ° -121.374799 °	
14	1.78	1.78	Earthen Levee	Trim / Thin Trees	WS	С	Trim trees to at least five feet above ground level.	37.820875 ° -121.370549 °	37.820875 ° -121.370549 °	
15	2.84	2.84	Earthen Levee	Encroachments	CR	С	Debris Inspector Comments: Concrete block near levee crown	37.816323 ° -121.353748 °	37.816323 ° -121.353748 °	
16	2.89	2.89	Earthen Levee	Encroachments	CR	С	Debris Inspector Comments: Mower clippings piled near levee crown.	37.816304 ° -121.352799 °	37.816304° -121.352799°	
17	3.62	3.62	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.  Inspector Comments: rodents off slope	37.817341 ° -121.343296 °	37.817341 ° -121.343296 °	
18	3.77	3.77	Earthen Levee	Encroachments	WS	С	Debris Inspector Comments: Mower clippings piled on levee slope.		37.816804 ° -121.341188 °	
19	3.87	3.87	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.818085 ° -121.340568 °	37.818085 ° -121.340568 °	
20	4.05	4.05	Earthen Levee	Encroachments	WS	С	Debris Inspector Comments: Mower clippings piled near levee crown on waterside slope.	37.820662 ° -121.340198 °	37.820662 ° -121.340198 °	
21	4.22	4.24	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.820341 ° -121.337864 °	37.820221 ° -121.337587 °	
22	4.36	4.36	Earthen Levee	Encroachments	ws	С	Debris Inspector Comments: Mower clippings piled near levee crown on waterside slope.	37.819506 ° -121.335572 °	37.819506° -121.335572°	
23	4.44	4.44	Earthen Levee	Encroachments	WS	С	Debris Inspector Comments: Mower clippings piled near levee crown on waterside slope.	37.818823 ° -121.334324 °	37.818823 ° -121.334324 °	
24	4.68	4.72	Earthen Levee	Vegetation	LS	С	Control annual grass and weeds on the levee slopes and easements.	37.815771 ° -121.334471 °	37.815298 ° -121.334927 °	

\* Location

LS: Land Side

WS: Water Side

CR: Crown

\*\* Rating

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### Levee Inspection Report By Mile - Fall 2009

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 03 Old River	Left	5.63	10/30/2009 12/10/2009	John Paasch

LMR	Levee	Levee Mile Category		regory Item		Rating	Action/Comment	GPS Latitud	Issue No.	
No.	Start	End	Category Item ** Tem **		ing	Action/Comment	Start	End	Photo	
25	5.12	5.12	Earthen Levee	Encroachments	WS	С	Debris Inspector Comments: Concrete debris left on waterside slope.	37.809601 ° -121.335778 °	37.809601 ° 121.335778 °	934
26	5.42	5.42	Earthen Levee	Animal Control	LS	С	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.807316 ° -121.331815 °	37.807316 ° 121.331815 °	933
27	5.43	5.43	Earthen Levee	Encroachments	LS	С	Debris Inspector Comments: Concrete headwall	37.807297 ° -121.331651 °	37.807297 ° 121.331651 °	932
28	5.46	5.46	Earthen Levee	Encroachments	LS	С	Prunings	37.807325 ° -121.331003 °	37.807325 ° 121.331003 °	931
29	5.48	5.48	Earthen Levee	Vegetation	LS	С	Remove the wild growth other than native grasses from the levee slopes.	37.807359 ° -121.330775 °	37.807359 ° 121.330775 °	930
30	5.54	5.60	Earthen Levee	Vegetation	WS	С	Control annual grass and weeds on the levee slopes and easements.	37.807460 ° -121.329574 °	37.807558 ° 121.328409 °	929